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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/641,636

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Rajiv Laroia

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5282

7590

12/16/2004

Thomas Stafford  
Patent Attorney  
4173 Rotherham Court  
Palm Harbor, FL 34685

EXAMINER

FERRIS, DERRICK W

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/641,636

**Applicant(s)**

LAROIA ET AL.

**Examiner**

Derrick W. Ferris

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,7-14,18-23,26,28,29,32-34,36-41 and 44-46 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 12-14,18-22,28,29,32,39-41 and 44-46 is/are allowed.  
6) ☒ Claim(s) 1,2,5,7-11,23,26,33,34 and 36-38 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 16 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Amendment*

1. **Claims 1, 2, 5, 7-14, 18-23, 26, 28, 29, 32, 33, 34, 36-41, and 44-46** as amended are still in consideration for this application. Applicant has amended claims **1, 11, 12, 18-21, 23, 26, 28, 32, 33, 36, 37-39, 44 and 45**. Applicant has canceled claims **3, 4, 6, 15-17, 24, 25, 27, 30, 31, 35, 42, and 43**. Applicant has added no claims.

2. Examiner **withdraws** the 112-second paragraph rejection(s) for Office action filed **04/1/2004**. Examiner thanks applicant for making the necessary corrections to clarify the recited claimed subject matter and thus withdraws the rejection.

3. Examiner **withdraws** (and replaces) the anticipated rejection to ***Turina*** (and corresponding rejections) for Office action filed **04/1/2004**. In addressing applicant's arguments in the response filed **06/30/2004**, the rejection is withdrawn since the reference may not clearly teach the further step of periodically repeating uplink traffic channel request. As a result please see the new obviousness rejection below.

4. Examiner does **not withdraw** the anticipated rejection to ***Kawabata*** (and corresponding rejections) for Office action filed **04/1/2004**. In addressing applicant's arguments in the response filed **06/30/2004**, at issue are the following three limitations: a dedicated exclusive control channel, a periodically repeating uplink traffic channel request, and wherein there is no need to include a control header information that indicates the structure of the control message. The control channel is dedicated since each *user* channel consists of a preamble, a control channel, and a traffic channel. In particular, the control channel is used to transmit channel request information, see e.g., column 6, lines 1-17. Thus each user or mobile has a dedicated control

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channel. In addition, latency is also minimized since the channel is “dedicated”. A periodically repeating uplink channel request is taught e.g., at column 3, lines 39-40 and column 6, lines 40-45. In particular, retransmission of the same information improves the quality and reliability of the control channel. The examiner would like to further note that the above motivation is also *the same* motivation provided by applicant on page 5, lines 17-21 which is not what applicant appears to argue in their remarks e.g., at page 17, third paragraph. Finally, *Kawabata* does not include header information since the header information (i.e., preamble) is sent outside or separate from the control channel, see e.g., column 6, lines 10-17. In other words, the control channel is part of a frame as shown e.g., in figure 2 such that the frame structure is independent of the structure inside the control channel as shown in figure 6.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1, 5, 7, 9, 11, 23, 26, 33, and 36-38** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,424,645 B1 to *Kawabata et al.* (“*Kawabata*”).

As to **claims 1, 23, and 33**, *Kawabata* shows at least one mobile in communication with a base station in figure 1. In particular, the preferred embodiment supports TDMA (see e.g., abstract). With respect to the limitation: “a transmitter for transmitting said uplink traffic channel requests in said prescribed portion of said control

channel resource to a base station” see e.g., figure 1. What may be at disagreement is the further limitation “wherein said particular mobile unit and said base station a priori know the location of said prescribed portion of said control channel resource in said control channel, whereby a need to include control header information with said uplink traffic channel is eliminated”. However, examiner notes the above-limitation is implicitly taught by the reference. In particular, at issue is what is meant by “control header information”. Examiner notes a reasonable but broad interpretation of control header information. In particular, applicant defines control header information as information that indicates “the structure and type” of the control message, see applicant’s specification at page 3, lines 21-29. Applicant fails to further clarify the above statement in applicant’s specification. In addition, examiner notes this definition is not further recited in the claims. Thus *Kawabata* teaches that uplink channel reservation requests messages are sent over control channels, these control channels support at least one mobile station, see e.g., column 6. The key difference for this rejection is that control channels dedicated exclusively to a particular mobile unit are taught with respect to time. In particular, see e.g., column 6, lines 45-49. Thus each of these channels are independent using a reasonable but broad interpretation of the claims. Furthermore, the location is known since the information is transmitted over a predetermined set of frames, see e.g., figure 3. As the information is sent multiple times, there is no need to include control header information with said uplink traffic channel requests.

As to **claims 5, 7, 11, 26, and 36-38**, see e.g., frames 5 and 6 in figure 1.

As to **claim 9**, see e.g., column 6, lines 35-38.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1, 5, 7, 8, 9, 10, 11, 23, 26, 33, and 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,031,832 to *Turina* in view of U.S. Patent No. 5,355,516 to *Herold et al.* (“*Herold*”).

As such to **claim 1**, figure 1 of *Turina* shows at least one mobile in communication with a base station. In particular, the preferred embodiment supports TDMA (see e.g., column 5, lines 20-25). With respect to the limitation: “a transmitter for transmitting said uplink traffic channel requests in said prescribed portion of said control channel resource to a base station” see e.g., column 6, lines 2-20 of *Turina*. What may be at disagreement is the further limitation “wherein said particular mobile unit and said base station a priori know the location of said prescribed portion of said control channel resource in said control channel, whereby a need to include control header information with said uplink traffic channel is eliminated”. However, examiner notes the above-limitation is implicitly taught by the reference. In particular, at issue is what is meant by “control header information”. Examiner notes a reasonable but broad interpretation of control header information. In particular, applicant defines control header information as information that indicates “the structure and type” of the control message, see applicant’s specification at page 3, lines 21-29. Applicant fails to further clarify the above statement

in applicant's specification. In addition, examiner notes this definition is not further recited in the claims. Thus *Turina* teaches that uplink channel reservation requests messages are sent over a PRACH or RACH (see column 6, lines 3-20). This RACH is dedicated since the channel is reserved, see e.g., column 7, lines 9-21. *Turina* further discloses that RACH are dedicated since the random access sub-channel is reserved using the USF (see column 2, lines 11-34). Examiner notes the USF does not indicate the structure or the type of the control message. For example, the type of channel will remain the same regardless of whether the channel is reserved or not. As such, the rest of the limitations are taught with respect to the VIP mobile station.

*Turina* may be silent or deficient to the further limitation of a controller associated with said transmitter to control said transmitting to periodically repeating transmission of said uplink traffic channel request in prescribed one or more of said one or more time slots prior to said particular mobile unit receiving a response from the base station.

*Herold* teaches the above limitation when a guard timer expires, see e.g., column 4, lines 35-49. In particular, the "controlled period of time" is the periodicity that the request is transmitted.

Examiner proposes to modify *Turina* to further include a guard timer. Thus examiner notes it would have been obvious to one skilled in the art prior to applicant's invention to teach the above limitation at issue. In particular, one skilled in the art would have been motivated to make the above modification for the purpose of improving the transmission of the quality in case the request is lost over the wireless medium.

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Examiner notes a further reasonable expectation of success since both references use the RACH as the control channel.

As to **claims 5**, see e.g., figure 3 of *Turina*.

As to **claims 7**, see e.g., figure 3 of *Turina*.

As to **claims 8 and 9**, see e.g., column 6, lines 3-20 of *Turina*.

As to **claims 10 and 11**, see e.g., column 6, lines 3-20 of *Turina*.

As to **claim 23**, see similar rejection to claim 1.

As to **claim 26**, see similar rejection to claim 5.

As to **claim 33**, see similar rejection to claim 1.

As to **claim 37**, see similar rejection to claim 5.

9. **Claims 2 and 34** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,031,832 to *Turina* in view of U.S. Patent No. 5,355,516 to *Herold et al.* (“*Herold*”) and “An Overview of Air Interface Multiple Access for IMT-2000/UMTS” to *Ojanpera et al.* (“*Ojanpera*”).

As to **claims 2 and 34**, *Turina* is silent or deficient to specifically mentioning OFDM. In particular, *Turina* discloses that any communications medium can be applied, see e.g., column 5, lines 29-32. *Ojanpera* further teaches OFDM, see e.g., pages 94-95. Examiner proposes to modify *Turina* to further clarify that OFDM is used. Thus examiner notes that it would have been obvious to one skilled in the art prior to include the use OFDM. One skilled in the art would have been motivated to use OFDM as part of a HIPERLAN. In particular, *Ojanpera* discloses such motivation at page 94, left-hand



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column. Furthermore, the *Ojanpera* reference teaches adapting OFDM for a time domain.

10. **Claims 36 and 38** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,031,832 to *Turina* in view of U.S. Patent No. 5,355,516 to *Herold et al.* ("*Herold*") and U.S. Patent No. 6,430,417 B1 to *Raith et al.* ("*Raith*").

As to **claims 36**, *Turina* may be silent or deficient to persistence. However, examiner notes that persistence may be taught as part of figure 3. *Raith* further teaches persistence, see e.g., figure 6a step with respect to steps 606 and 607. Examiner proposes to modify *Turina* to further clarify persistence. Thus examiner notes that it would have been obvious to one skilled in the art prior to include persistence. One skilled in the art would have been motivated to include persistence to help eliminate interference, errors or long bursts. In particular, *Raith* discloses such motivation at column 8, lines 40-51 and column 14, lines 50-67.

As to **claim 38**, see figure 6a of *Raith*.

11. **Claims 2 and 34** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,424,645 B1 to *Kawabata et al.* ("*Kawabata*") in view of "An Overview of Air Interface Multiple Access for IMT-2000/UMTS" to *Ojanpera et al.* ("*Ojanpera*").

As to **claims 2 and 34**, *Kawabata* is silent or deficient to specifically mentioning OFDM. In particular, see *Kawabata* column 1, lines 8-15. *Ojanpera* further teaches OFDM, see e.g., pages 94-95. Examiner proposes to modify *Kawabata* to further clarify that OFDM is used. Thus examiner notes that it would have been obvious to one skilled in the art prior to include the use OFDM. One skilled in the art would have been

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motivated to use OFDM as part of a HIPERLAN. In particular, *Ojanpera* discloses such motivation at page 94, left-hand column. Furthermore, the *Ojanpera* reference teaches adapting OFDM for a time domain.

12. **Claims 8 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 6,424,645 B1 to *Kawabata et al.* ("*Kawabata*") in view of U.S. Patent No. 6,295,453 B1 to *Desgagne et al.* ("*Desgagne*").

As to **claims 8 and 10**, *Kawabata* is silent or deficient to specifically mentioning priority and rate. *Desgagne* further teaches priority and rate, column 9, lines 54-65.

Examiner proposes to modify *Kawabata* to further teach wherein said uplink traffic channel request includes a request for a traffic channel in terms of a rate of transmission of data and wherein said uplink data includes priority information regarding said mobile unit. Thus examiner notes that it would have been obvious to one skilled in the art prior to wherein said uplink traffic channel request includes a request for a traffic channel in terms of a rate of transmission of data and wherein said uplink data includes priority information regarding said mobile unit. One skilled in the art would have been motivated to ensure quality of service for voice communications as well as provide increased capacity for data messages. In particular, *Desgagne* discloses such motivation at column 9, lines 54-65.

***Allowable Subject Matter***

13. **Claims 12-14, 18-20, 21, 22, 28, 29, 32, 39-41, and 44-46** are allowable.

***Conclusion***

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris  
Examiner  
Art Unit 2663

  
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